

(73)

**Seed physical dormancy of *Cassytha filiformis* (Lauraceae, Magnoliidae);  
A hemiparasitic angiosperm**

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**Abstract**

*Cassytha filiformis* is a hemi parasitic member of the family Lauraceae with a panatropical distribution. In Sri Lanka it is distributed in both wet and dry zones, associated with seashore and mangrove vegetations. Although, in many countries *C. filiformis* has been recorded as a parasitic weed, it is utilized in folk medicine in several countries. However, no information is available on the seed dormancy, germination and seed storage behaviour of this genus. Thus, the primary aim of this study was to gather information on the dormancy, germination and storage behaviour of *C. filiformis* fruits (dispersal unit).

Mature fruits were collected from numerous vines in Ambalangoda. Fruit moisture content (FMC) was determined using oven dry method. Imbibition and germination of untreated and manually scarified fruits was studied. Dye (Methelene blue) tracking experiments were carried out to confirm the physical dormancy (PY). Hand sections of fruits were observed under a light microscope to study the anatomy of fruit and seed coat. Several treatments (dry heat, boiling water, acid scarification and sand paper scarification) were used to break the PY of fruits of *C. filiformis*.

FMC of *C. filiformis* ( $10.5 \pm 0.9$  %) reveals that fruits are orthodox in storage behaviour. Manually scarified fruits increased mass >80% while, untreated fruits increased mass <16%. Manually scarified fruits germinated significantly higher percentage (80%) than untreated fruits (25%). Methelene blue did not penetrate through the endocarp. Thus, it could be concluded that *C. filiformis* fruits have PY. Light microscopy of seed sections confirmed the presence of a palisade layer in the endocarp where as palisade layer have been identified as water impermeable layers in seeds with PY. However, none of the treatments except sandpaper scarification were successful in breaking PY. This is the first record of PY in Magnolidae (Lauraceae) and with this record; number of families producing seeds/fruits with PY has been increased to 18.

**Key words:** Fruit coat anatomy, Orthodox seeds, palisade layer, scarification